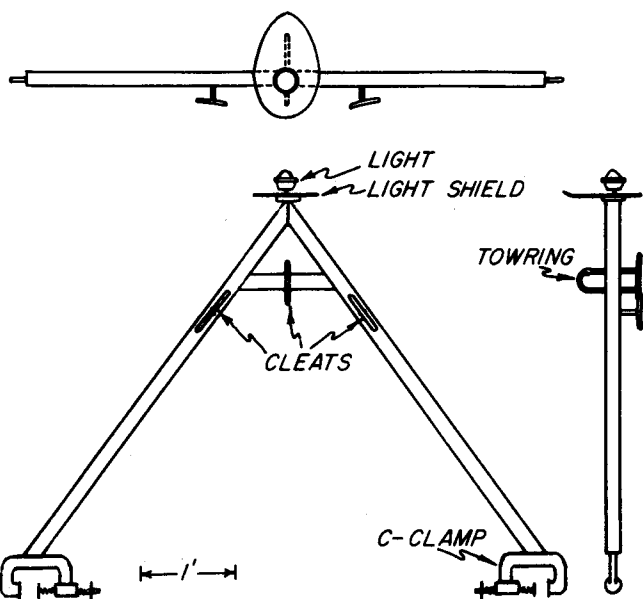
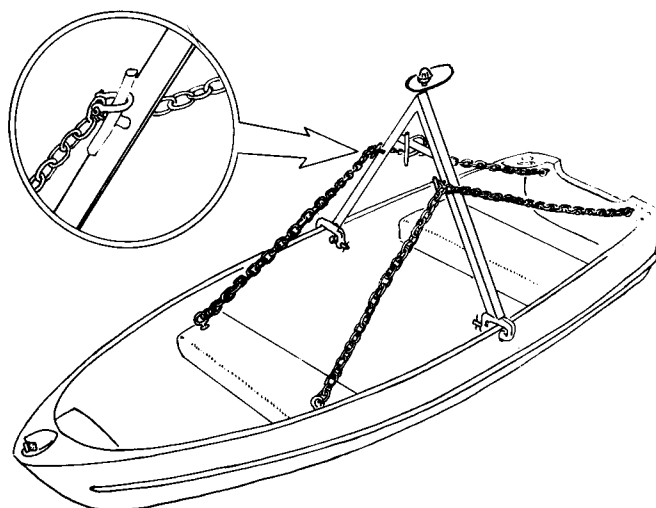


A FRAME USED AS A TOWING AID FOR SMALL BOATS

It is often difficult to tow plankton nets and other collecting gear from small boats because attaching the towline to the transom reduces maneuverability of the boat.

A device proved helpful on a 16-foot aluminum boat is a 3-foot A-frame (three pieces of 1.5-inch angle iron welded together) supported by stays. A 4-inch C-clamp is welded to the base of each leg for attaching the frame to the gunwales. A rope stay from the center cleat to the bow is adequate support, and a ring on the rear center of the crossbar is attachment point for the towline. For more rigid support,



chain stays may be shackled fore and aft by eyebolts fitted to the hull. During towing, a shackle on each chain is put over the iron cleat welded to the forward face of each leg of the frame.

With the frame, meter plankton nets have been towed at speeds up to 2 knots, at the surface and on the bottom, in narrow, winding channels. Advantages of its use are: the boat is more maneuverable, the towline swings clear of the operator and motor, working space is not appreciably reduced, cost is low (materials and labor, \$7.50), and the chains form guard-rails.

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